CLAIMS

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1. Reactor for carrying out non-adiabatic catalytic reactions consisting of a metallic ingot and comprising at least one reaction passage extending through the ingot and being adapted to hold a catalyst for non-adiabatic conversion of a feedstock;

inlet passages for introduction of the feedstock into the reaction passage and outlet passages for withdrawing reacted feedstock, the inlet and outlet passages being provided within the ingot; and

heating or cooling means for maintaining the catalytic reactions within the reaction passage.

- 15 2. The reactor of claim 1, wherein a number of the reaction passages is arranged in parallel rows within the ingot.
- 3. The reactor of claim 1, wherein the inlet and outlet passages are provided within the ingot substantially perpendicular to the reaction passages and connect the reaction passages in parallel manner.
- 4. The reactor of claim 1, wherein the heating or cooling means are arranged within and/or at surface of the ingot.
- 5. The reactor of claim 1, wherein the heating or cooling means is provided in a substantially perpendicular direction with the reaction passages.

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- 6. The reactor of claim 1, wherein the heating means is in form of electrical heater.
- 7. A reactor containing a number of the metallic ingots according to claim 1.
 - 8. The reactor of claim 7, wherein the number of the metallic ingots is arranged within a common shell.
- 10 9. The reactor of claim 8, wherein the common shell is heat insulated.
 - 10. The reactor according to any one of the preceding claims, wherein the reaction passages and the outlet and inlet passages are in form of drilled channels.